

## REMARKS

In the Official Action dated October 3, 2000, the Examiner made the following rejections/objections to the present application:

- Claims 1, 5, 9, 13 and 16 are rejected as introducing new matter.
- Claims 1-12 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Claim(s) Claims 1-8, 13 and 14 were rejected under 35 USC 103 as being unpatentable over Yee et al. in view of the Lowenheim text and Poris.
- Claim(s) 9-12, 16 and 17 were rejected under 35 USC 103 as being unpatentable over Yee et al. in view of the Lowenheim text and further in view of Mayer et al.

At the time of the mailing of the present Office Action, claims 1-14, 16 and 17 were pending in the present application. By this amendment, claims 1-7, 9, 10, 13-14, 16 and 17 have been amended. Claims 8, 11 and 12 have been canceled in new claims 19-24 have been added to the application. After this amendment, claims 1-7, 9, 10, 13-14, 16, 17 and 19-24 remain pending in the application.

### The New Matter Rejection

The Examiner rejected the claims that were amended to include the term "microelectronic workpiece" as adding new matter to the specification. It is respectfully submitted that such a new matter rejection is inappropriate and that the standard for such a rejection should be instead based on the written description requirements of 35 USC 112, first paragraph. This distinction was clarified in *In re Rasmussen*, 211 USPQ 323 (CCPA 1981), which states the following:

The proper basis for rejection of a claim amended to recite elements thought to be without support in the original disclosure, therefore, is §112, first paragraph, not §132. The latter section prohibits addition of new matter to the original disclosure. It is properly employed as a basis for objection to amendments to the abstract, specifications, or drawings attempting to add new disclosure to that originally presented. Past opinions of this court, in cases in which a §132 claim rejection was reviewed on a §112 analysis, should not in future be viewed as having

approved the employment of §132 as a basis for claim rejection. The amended claims involved in those cases should have been rejected under §112, first paragraph. The claim rejections in those cases could then have been explicitly affirmed or reversed on direct applications of §112, rather than on §112 analyses applied to §132 rejections. Accordingly, such cases are overruled insofar as they approved rejection of claims under §132.

Under the standard that is to be applied to determine compliance with 35 USC 112, first paragraph, it is recognized that an applicant is entitled to claim as broad as the prior art and the disclosure will allow. *Id.* at 326. The court in *In re Smythe and Shamos*, 178 USPQ 279 (CCPA 1973) described the standard in the following manner:

"A hypothetical situation may make our point clear. If the original specification of a patent application on the scales of justice disclosed only a 1-pound "lead weight" as a counterbalance to determine the weight of a pound of flesh, we do not believe the applicant should be prevented, by the so-called "description requirement" of the first paragraph of § 112, or the prohibition against new matter of § 132, from later claiming the counterbalance as a "metal weight" or simply as a 1-pound "weight," although both "metal weight" and "weight" would indeed be progressively broader than "lead weight," including even such an undisclosed, but obviously art-recognized equivalent, "weight" as a pound of feathers. The broader claim language would be permitted because the description of the use and function of the lead weight as a scale counterbalance in the whole disclosure would immediately convey to any person skilled in the scale art the knowledge that the applicant invented a scale with a 1-pound counterbalance weight, regardless of its composition. Likewise, we find in the facts here a description of the use and function of the segmentizing medium which would convey to one skilled in the sample-analysis art the knowledge that applicants invented a sample analyzer with an inert fluid segmentizing medium."

It is submitted that the term "microelectronic workpiece", as presented in the prior claims, does not introduce new matter and that the specification supports the term as required by 35 USC 112, first paragraph. Notwithstanding this fact, the claims of the application have been amended to remove the term "microelectronic workpiece" and instead now refer to the workpiece as a "wafer" on which "microelectronic components" are to be formed. A person of ordinary skill in the art would clearly recognize that, in using a semiconductor wafer as the object that is to be subject to electroplating, the present application contemplates all such wafers on which microelectronic components are fabricated, regardless of whether the substrate is a

semiconductor or some other material. Accordingly, withdrawal of this rejection is respectfully requested.

*The Rejections under 35 USC 112, Second Paragraph*

It is submitted that all claims of the present application are in full compliance with 35 USC 112, second paragraph, in that they reasonably apprise a person of ordinary skill in the art of the scope of the invention. As observed by the Federal Circuit in *Shatterproof Glass Corp. vs. Libbey Owens Ford Company et al.*, 225 USPQ 634, 641 (Fed. Cir. 1985):

"The amount of detail required to be included in claims depends on the particular invention and the prior art, and is not to be viewed in the abstract but in conjunction with whether the specification is in compliance with the first paragraph of section 112: "If the claims, read in the light of the specifications, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more." *Georgia-Pacific Corp. v. United States Plywood Corp.*, 258 F.2d 124, 136, 118 USPQ 122, 132 (2d Cir.), cert. denied, 358 U.S. 884, 119 USPQ 501 (1958)."

Here, such notice is given to those of ordinary skill in the art. Tools used to electroplate a metal onto the surface of a wafer pursuant to fabricating microelectronic components on the wafer are routinely designed to electroplate a metal, the properties of which are predetermined and known in advance. Therefore, a person of ordinary skill in the art familiar with such tools would readily recognize that they would run afoul of the claims that issue of the present application if, inter alia, they designed the reactors of the tool to have contacts that include contact faces formed primarily from the metal that the tool is designed to electroplate onto the wafer. Withdrawal of the rejections under 35 USC 112, second paragraph, is therefore warranted.

*The Rejections under 35 USC 103*

The independent claims of the present application have been rejected as being unpatentable over Yee et al. in view of the Lowenheim text and Poris. In rejecting the claims of the present application, the Examiner has stated:

"It would have been obvious at the time the invention was made to have electroplated a layer of metal such as gold, which is used to metallize a semiconductor wafer as taught by Poris, onto the cams of Yee et al. because desirable properties such as improved electrical contact and avoidance of poisoning the semiconductor workpiece would have been obtained as taught by Lowenheim."

(Office Action, p. 4).

It is respectfully submitted that there is no nexus between electroplating a material on a semiconductor wafer and pre-conditioning a contact used to electroplate the material as suggested by the Examiner. The fact that gold may be electroplated onto a semiconductor wafer and has certain beneficial properties in no way discloses nor suggests that the contact used to electroplate that gold can be pre-conditioned or electroplated with a metal that principally comprises gold. It is well recognized that a material may have beneficial characteristics in one application while having detrimental characteristics in another. Even the Lowenheim text recognizes this fact since it devotes separate chapters to different metals. Further, the Lowenheim text itself divides these metals into different groups based on the desired characteristics and application. (Lowenheim Text at p. 169).

Notably, none of the references of record include *any* contact having a pre-conditioned contact layer, regardless of the material. The contacts used in Yee et al. do not include pre-condition contact faces. Further, Yee et al. solves the problem of "poisoning" by using an inert material to form the contact. A person of ordinary skill in the art would, therefore, never even attempt to pre-condition the Yee et al. contacts with gold or any other material. Since Yee et al. solves its contact problems using an entirely different solution, it effectively teaches away from the claimed invention.

The Examiner has not established a *prima facie* case of obviousness since there is no teaching, suggestion, or motivation to combine the references of record. See *In re Rouffet*, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). Further, Yee et al. teaches away from the claimed combination since it addresses any problems associated with its contacts in a different manner. The Federal Circuit addressed a similar situation in *In re Rouffet*, *supra*

at 1457. There, one of the prior art references relied on by the USPTO addressed a stated problem. That stated problem, according to the USPTO, provided the motivation to combine the references. However, the Federal Circuit recognized the fact that the problem was addressed in a different manner than the claimed invention, stating the following:

"To the extent that Ruddy at all addresses handovers due to satellite motion, it addresses this subject through the selection of orbital parameters. Ruddy does not teach the choice of a particular shape and alignment of the beam projected by the satellite. Thus Ruddy addresses the handover problem with an orbit selection, not a beam shape. The Board provides no reasons that one of ordinary skill in this art, seeking to minimize handovers due to satellite motion, would combine Ruddy with Rosen and King in a manner that would render the claimed invention obvious."


*Id.* at 1457.

#### Conclusion

It is submitted that all of the claims of the present application are allowable over the art of record, taken singly or in combination, and that the application is therefore in condition for allowance. However, if there are any further unresolved issues in connection with this application, the Examiner is encouraged to contact Applicants' representative, Robert Polit, at the telephone number identified below.

Respectfully submitted,

BY

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